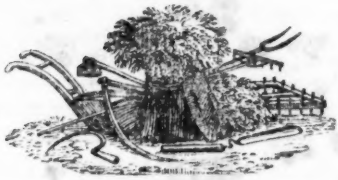
THE

AGRICULTURAL MAGAZINE.



CAMDEN, NEW JERSEY, OCTOBER 6th, 1825.

In commencing the "Farmer's Magazine," we make no pretentensions to superior skill in Farming, we do not set ourselves up as instructers in the very respectable, important, and first of avocations that engaged the attention of man, and upon which the very means of his subsistence depend; we are sufficiently aware that no general rule for cultivation can be laid down, adapted to every variety of soil, climate and production, and that the best concerted system of farming, aided by the proudest efforts of human skill, is inadequate to ensure success, independently of the bounties of that providence who presides over the seasons, and rules the destinies of the Universe. Yet, as man is endowed with the attribute of understanding, with astonishing powers of body and mind, and faculties to render the soil upon which he is placed subservient to the purposes of his existence, improvements are almost daily developing in domestic economy, as well as in other departments of science, with which it is intimately connected, from the well directed exertions and experiments of judicious Agriculturalists. Our object, therefore, will be to give a detail of such of these as may be best adapted to the soil and climate of the Middle and Western States, and of publishing such useful hints as may be furnished by the practical farmers within those States.

The institution of Agricultural Societies has given an additional impulse to improvements in husbandry, within the limits of their respective locations, by promoting the introduction of the most approved breeds of the several species of Stock, the purest and best seeds of Grains and Grass, a free and liberal interchange of opinions, and by exciting a worthy ambition to excel in agricultural pursuits, by annual exhibitions, and the distribution of Premiums, and finally raising the character of the Farmer to its proper level and on an eminence with the other professional divisions of the community.

Since the depreciation of the price of grain, laudable trials have been made to introduce the cultivation of some of the exotics supposed to be congenial to our soil and climate; such as the grape, the silk worm, castor bean, the Turkish poppy for opium, rheubarb, madder, &c. some of which, have been attended with flattering

success, and which, if generally successful, may, at no very distant period, become worthy the attention of the farmer, and of much national importance. Mr. Mahlon Atkinson, an enterprising gentleman of Philadelphia, purposes setting out in a few days on a tour through the Western country, in pursuit of a location adapted to the cultivation of the white mulberry, and to the establishment of a silk manufactury on a large scale, as well as the cultivation of the above mentioned, and some other drugs. He has imported several species of seed for the purpose, among which are some of the genuine Turkish poppy, and has politely furnished us with a part of the latter, a share of which we tender to such of our subscribers as are inclined to make an experiment on its cultivation.

THE SEASON.

The late summer has been as remarkable for heat and drougth in the middle and eastern States, as that of 1816 was for cold and drougth. In July, at Philadelphia, the thermometer rose at 12 o'clock as high as 96 degrees, Farenheit, in-doors; out of doors in the shade, to 98°, and in the sun as high as 124°. In the cities of Baltimore, New York and Boston, the heat of the atmosphere seems to have been equally oppressive—many persons have fallen victims to the intensity of the solar rays, and from imprudently drinking cold water when overheated, particularly in the two latter cities. Swallows are stated to have fallen dead among the workmen in the large ship house in Philadelphia; fish, supposed to have perished from the effects of heat, were found floating on the surface of some of our rivers; and stage proprietors and others have sustained heavy losses, attributed to overdriving through the heat.

The season has likewise been remarkably warm in Europe. In London the thermometer was as high as 84°, a circumstance very uncommon in that climate; at Paris as high as 96, and several persons are stated to have died from effects of heat in both cities.

The Chevalier Debrun des Beaumer, in a letter addressed to the Journal des Debates, states, that on the 19th of July, at his residence near Dourdan, about thirty miles from Paris, on an elevated plain about two hundred feet above the surface of the river, the thermometer rose in the shade, and in a place open towards the north, where the sun does not come at any time, to 35° above 0, by Reaumer's scale. This is equal to 104° by Farenheit's scale. On the same day he exposed cold water in a copper kettle to the rays of the sun, and at one o'clock he and several other persons plunged their hands in the water, but found it so hot that they were glad to withdraw them as soon as possible. On measuring its temperature by the thermometer, he found it to be 40°, equal to 122° of Farenheit. Stones, iron and other metalic substances become so heated that he could not hold them in his hand. He remarks that he thought that among more than 30,000 meteorological observations, which had been made in the last century and in this, he considered these as deserving of particular notice. He adds, that to augment the calamity, there had not been for seven weeks, the least moisture in the air, or the least dew on the leaves, and that there had been a

constantly burning sun, without clouds, and a parching wind from the north east during the whole time.

CROPS.

The crops of Wheat, Rye, Oats and the first of Grass have mostly been abundant, but those of Corn, Buckwheat, Potatoes and the later of Grass, in the states of Pennsylvania, New Jersey, New York and in some of the Eastern states, will fall generally short, and will probably yield not much over half a crop. In the state of Ohio and in some of the southern States, the prospect of Corn is stated to be very flattering, therefore to bring the whole extent of the United States into the estimation, we think there will be about an average crop.

CURRENT PRICES OF GRAIN &c.

At PHILADELPAIA, Wheat is selling at from 90 to 95 cents per bushel, Rye from 56 to 62, Corn from 60 to 70, and Oats from 33 to 36 cents per bushel. Superfine Wheat Flour is quoted at 5 dollars per barrel, Hams from 8½ to 11 cents per lb. Butter about the same.

At CHARLESTON, South Carolina, Wheat Flour is quoted at from 7 to 8 dollars per barrel, Wheat at from 90 to 100 cts. per bushel, Rye at 65, Corn from 70 to 80, and Oats, from 40 to 50 cents.

A correspondent informs us, that at CINCINNATTI (Ohio) Wheat was sold through the season, at from 33 to 37½ cents per bushel, Corn from 18 to 20, Oats from 12½ to 18, and Rye at 25 cents per bushel. Pork from 5 to 6 cents per lb. Hams from 7 to 8, Lard the same, Cheese 6 cents, and Butter from 12½ to 20 cents.

The price of Cotton, has for some time past, been on the decline, which has been productive of much commercial embarrassments and some failures, both in the Uuited States and Europe.

THE SILK WORM.

As a number of experiments are making in this country, on the practicability of raising the silk worm, with a view of promoting the domestic manufacture of silk, we give, from the best authorities, the following brief sketch of the natural history of the silk worm, the discovery of silk manufactures, and the method used in propagating and managing this curious worm in China, the land of its nativity, under a presumption, that, as a great part of the United States is situated between like latitudes, a process somewhat similar would be well adapted to our local situation. The fact that the white mulberry-tree flourishes here, and is easily cultivated, the results of experiments which have already been made, and the enterprising disposition prevalent among some of our public spirited citizens to continue and improve upon them, argue that the era of silk manufactures is about to commence in this country, and that, in process of time, the cultivation of silk may, by proper attention, become profitable to the husbandman, as well as a source of national

wealth, by retaining millions of dollars at home, which would otherwise be sent to, and expended in, foreign countries, in the purchase of this elegant, durable and very fashionable material for clothing.

Sketch of the natural history of the Silk Worm.

The silk worm is a native of China, and proceeds from an egg not larger than a pin's head, deposited by a moth or butterfly either on paper kept for the purpose, or on the leaves of the mulberry-tree, on which the worm subsists until it becomes the size of a catterpillar, when it ceases to eat, wraps itself up in a silken cone, nearly the size and shape of a pigeon's egg, when the head separates from the body, which is of a chesnut colour, covered with hard scaly rings, and becomes metamorphosed into a chrysalis filled with a liquid substance, and exhibits scarcely any signs of life, motion, or marks of animal form to the naked eye; in which torpid state it remains until it awakes to new life, puts off the rings with which it is surrounded, and making a passage out of its silken sepulchre, emanates a perfect moth or butterfly, fluttering about from flower to flower as if rejoicing at its resurection to a new and more eligible life; abstains entirely from food, prepares for dissolution, and propagates its species by layimg an abundance of eggs, when both the male and female die.

Discovery of Silk.

The manufacture of silk was invented in China; and the Chinese history ascribe the discovery to one of the wives of the emperor Hoangti, who, with the assistance of the ladies about her court brought this important branch of industry to such a degree of perfection that the Chinese, whose clothing previously consisted of the skins of beasts, shortly after appeared in all the gay attire of silken stuffs, the fruit of her ingenuity and labour. From China, silk passed to the Indians, from thence to Persia, thence to Greece, from the latter to the Romans, among whom, at its first introduction, it was valued at its weight in gold.

Method used in propagating and managing the Silk Worm in China.

The most approved method of bringing up and managing the Silk Worm practiced in China, and from which the best and finest silk is obtained is that of keeping them in rooms, in which large sheets of paper are laid; on these the moths deposit their eggs to which they firmly adhere. The sheets are then hung on a beam of the room, with the eggs inward, and the windows are opened in the front to admit the wind: but no hempen ropes must ever come near the worms or their eggs. After some days the sheets are taken down, rolled up loosely with the eggs inward, and then hung up again, during the summer and autumn.

"At the end of December, or beginning of January, the eggs are put into cold water, with a little salt dissolved in it. Two days after they take them out, hang them up again, and when dry roll them a little tighter, and enclose each separately, standing on one end in an

earthen vessel. Some put them into a lye made of mulberry-tree ashes, and then lay them some moments in snow-water, or else hang them up three nights on a mulberry-tree to receive the snow or rain, if not too violent.

The time of hatching is when the leaves of the mulberry- trees begin to open, for they are hastened or impeded according to the different degrees of heat or cold to which they are exposed. When they are ready to come forth, the eggs swell, and become a little pointed.

The third day before they are hatched, the rolls are taken out of the vessel, stretched out, and hung up with the back-sides toward the sun, till they receive a kindly warmth, and then being rolled up close, they are set upright in a vessel in a warm place. This is repeated the next day and the eggs change to an ash-grey: they then put two sheets together, and rolling them close tie the ends.

The third day, towards night, the sheets are unrolled and stretched on a fine mat, when the eggs appear blackish. They then roll three sheets together, and carry them into a pretty warm place, sheltered from the south wind. The next day the people on taking out the rolls and opening them, find them full of worms like small black ants.

The apartment for the silk-worms ought to be on a dry rising ground, in a sweet air, and free from noise. The rooms should be square, and very close, for the sake of warmth; the door should be to the south, and covered with a double mat, to keep out the cold; yet there should be a window on every side, that when it is thought necessary the air may have a free passage. In opening a window to let in a refreshing breeze, care must be taken to keep out the gnats and flies. The room must be furnished with nine or ten rows of frames, about nine inches one above the other. On these they place rush hurdles, upon which the worms are fed till they are ready to spin; and, to preserve a regular heat, stove fires are placed at the corners of the room, or else a warming pan is carried up and down it; but it must not have the least flame or smoke. Cow dung dried in the sun is esteemed the most proper fuel.

The worms eat equally day and night; the *Chinese* give them on the first day forty eight meals, that is, one every half hour; the next thirty; the third day they have still less. As cloudy and rainy weather takes away their stomach, just before their repast a whisp of very dry straw, the flame of which must be all alike, is held over the worms to free them from the cold and moisture that benumbs them, or else the blinds are taken from the windows to let in the full day light.

Eating so often hastens their growth, on which the chief profit of the silk worms depend. If they come to maturity, in twenty three or twenty five days, a large sheet of paper covered with worms, which at their first coming from the eggs weigh little more than a drachm, will produce twenty five ounces of silk; but if not till twenty-eight days, then they yield only twenty ounces; and if they are a month or forty days in growing, they then produce but ten.

They must be kept extremely clean, and often removed; and

when they are pretty well grown, the worms belonging to one hurdle must be divided into three, afterward they must be placed on six, and so on to the number of twenty, or more; for being full of humours, they must be kept at a due distance from each other. The critical moment for removing them is when they are of a bright yellow and ready to spin; they must be surrounded with mats at a small distance, which must cover the top of the place, to keep off the outward air; and because they love to work in the dark. However, after the third day's labour the mats are taken away from one o'clock till three, but the rays of the sun must not shine upon them. They are at this time covered with the sheets of paper that were used on the hurdles.

As to the manner in which the silk worm performs this work; it at first seems to labour without design, and forms only a kind of down; This is its first days employment. On the second it begins to form the outside of the cone or ball, in the midst of the loose silk made the preceding day. On the third day it is quite hid, and the rest of its performance is concealed from our sight. At length the cones being finished in seven days, the worm changes its form, and becomes a chrysalis; the cones are then gathered and laid in heaps, but they first set apart those designed for propagation upon a hurdle in a cool airy place.

The next care is to kill the moths in those cones which are not to be bored. The best way of doing this is to fill large earthen vessels with cone layers of ten pounds each, throwing in four ounces of salt with every layer, and covering it with large dry leaves, and closely stopping the mouth of the vessels. But in laying the cones into the vessel they separate the long, white, and glittering ones, which yield a very fine silk, from those that are thick, dark, and of the colour of the skin of an onion, which produce a coarser silk.

This is the method of raising worms in the spring, which is the general season for doing it, though some hatch eggs in summer and autumn."

We are indebted to the politeness of Doctor ISAAC S. MULFORD, of Camden, for the following concise natural history of the White Poppy, &c.

WHITE POPPY.

The (Papaver Somniferum) White Poppy, belongs to the 12th class and 1st order of the Linnæan arrangement: it is an annual plant, growing wild in some countries, and is distinguished for the beauty and variety of its flowers. The leaves, stalks and capsules of the Poppy, contain a milky juice which may be collected in considerable quantities by wounding them when nearly ripe. This juice exposed to the air thickens into a mass which is Opium; this is contained in the greatest quantity in the capsules. The seed contain none of it but are simply emulsive. The Poppy heads will yield at this extract nearly one sixth of their whole weight. The Poppy is a native of the South of Asia, but it accommodates itself greatly to varieties of soil and climate. It is often found in Great Britain and some fine specimens of British Opium have been prepared, but

the climate of that country is not so favorable as to encourage its general cultivation. For this purpose the United States is much better suited, and there is no doubt that it might here, become a profitable branch of Agriculture.

TO THE EDITOR OF THE FARMER'S MAGAZINE.

PAPAVER SOMNIFERUM.

MR. ELLIS,

A few evenings since I was spending a leisure hour with an intelligent friend, when the subject of raising opium was preferred in the conversation; an enterprising and respectable agriculturalist of the neighborhood present, discovered considerable interest in the disquisition, and manifested a disposition to engage in the cultivation of the plant from which the opium is procured or collected.

Desirous of seeing the speculation successful, which I consider altogether creditable to the gentleman who undertakes it; I arranged the following condensed statement, which I hope will be sufficiently illustrative of the rudiments, to be observed in the managment of the *papaver somniferum.*

Kœmpfer, relates that the heads when almost ripe, are wounded with a fine edged instrument, by which as many parallel incisions are made at once from top to bottom; that the juice which exudes is next day scraped off, and the other side of the head wounded in like manner, and that the juice is afterwards worked with a little water, till it acquires the consistence, tenacity and brightness, of the finest pitch.

The most circumstantial detail of the culture of the poppy, and of the method of procuring the opium from it, is that given by Mr. Kerr, as practised in the province of Babar: he says "the field being well prepared by the plough and harrow, and reduced to an exact level superficies, is then divided into quadrangular areas, of seven feet long and five feet in breadth, leaving 2 feet of interval, which is raised five or six inches, and excavated into an aqueduct for conveying water to every area, for which purpose they have a well in every cultivated field.

The seeds are sown in October or November. The plants are allowed to grow six or eight inches distant from each other, and are plentifully supplied with water. When the young plants are six or eight inches high, they are watered more sparingly, but the cultivator strews all over the areas a nutritious compost of ashes, human excrements, cow dung, and a large portion of nitrous earth, scraped from the high ways and old mud walls.

When the plants are nigh flowring, they are watered profusely to increase the juice. When the capsules are half grown, no more water is given, and they begin to collect the opium.

At sun set they make two longitudinal incisions upon* each half ripe capsule, passing from below upwards, and taking care not

* Vide Rees Encyclopedia.

to penetrate the internal cavity of the capsule. The incisions are repeated every evening until each capsule has received six or eight wounds, they are then allowed to ripen their seeds. The ripe capsules afford little or no juice. If the wounds were made in the heat of the day, a cicatrix would be too soon formed. The night dews, by their moisture, favour the extillation of the juice.

"Early in the morning, old women, boys and girls, collect the juice by scraping it off the the wounds with a small iron scoop, and deposit the whole in an earthen pot, where it is worked by the hand, in the open sunshine, until it becomes of a considerable spissitude. It is then formed into cakes of a globular shape, and about four pounds in weight, and laid into little earthen basins, to be further exsiccated. These cakes are covered over, with the poppy, or tobacco leaves, and dried until they are fit for sale.

This differs but little, from the description given by the American botanist, and it will not be superfluous to copy the statement of our own countryman†, Professor Coxe, which is no less valuable for its brevity.

"Opium, he says, is the inspissated juice of the poppy. In the evening several superficial longitudinal incisions are made in the capsules, when they are almost ripe, with a knife having from three to five blades. The juice which exudes during the night, the next day after it has been thickened, by the heat of the sun, is collected by means of iron scrapers, and put in an earthen pot. The operation is repeated as long as the heads furnish juice in sufficient quantity, and the opium is worked into masses with a wooden spatula, in the heat of the sun, until it acquires the due degree of thickness, when the masses are covered with poppy or tobacco leaves."

† Vide Coxes Amer. Dispensat. 5th Edid. p. 457.

JOHN A. ELKINTON.

Haddonfield, Sept. 22d, 1825.

FOR THE NEW JERSEY AND PENNSYLVANIA AGRICULTUTAL MAGAZINE.

MANURES.

DEAR SIR—In compliance with your request, I embrace the first leisure moment to answer your several enquiries on the subject of my experience in the use of manures, &c. &c.

Question.—When did you commence the use of ashes? the price given, the quantity used, &c.?

Answer.—Twenty-two years since; the quantity then used, from twenty to thirty cart loads, (of about sixteen bushels the load) per acre; price at that time, from twenty-five to thirty cents the load. For the last five years the price has been varied from $1,10, to $1,30 at the factory in Philadelphia; freight and other expenses to be added. When I commenced, but few farmers purchased ashes; they were generally taken off by New England and Long Island sloops, as return cargoes. At this time the demand is so great, but few, if any, are exported; they are principally used by

the Jersey farmers, (with a few in the county of Bucks, near the Delaware.) They appear better adapted to cool the warm lands of Jersey, than to warm the cold clay land of Pennsylvania, where they are but seldom used. As they have advanced much in price, I now use from ten to twelve cart loads per acre, spread thinly over the ground from a cart or waggon, and harrowed or ploughed immediately in.

In the use of ashes, those wishing to have the full benefit of a first crop of winter grain should put them on in the month of August, September, or by the middle of October. I once sowed part of a field of rye the first week in September; disappointment in getting ashes for the residue prevented my sowing until the first week in November; difference more than three to one in favour of the first sown. If sown early, the nutricious qualities of the ashes are imparted to the earth, and from the earth to the plant; If late sown, the grain receives no benefit from the ashes until the warm rains in the spring, when too late to materially benefit the first crop, (except where the land is saturated with ashes or other manure.) I have seen it backen a crop and create mildew and rust, as is some times the case in sowing plaister on wheat, in the spring keeps it green and prevents it ripening.

Question.—Did you purchase horse or stable manure at the same time, and try the difference with ashes, and compare prices and results?

Answer.—In 1808, I had them spread on adjoining lands in the same field, on different plans; the first crop of winter grain preferable from the stable manure, and every succeeding crop quite deficient;—though seventeen years have elapsed, the contrast is still great. The land spread with ashes, shews every spring an abundance of white clover, while on that spread with barn yard and stable manure, there is but little or none to be seen.

Question.—Have you ever tried the street manure of Philadelphia? at what time? the quantity per acre, price and result?

Answer.—I have made use of this manure occasionally for the last ten years; the quantity per acre, from twenty to twenty-five cart loads; price about forty cents the load in Philadelphia; result, more certain than ashes or stable manure for the first winter crop; much better for succeeding crops than stable manure, though quite deficient compared with ashes.

Question.—Have you ever experienced the use of lime as a manure, the quantity per acre, price, time you commenced, and what is the result?

Answer.—I have, though not until within the last five years. I was induced to make trial of it from what I had seen and heard on my annual excursion of about a thousand miles over the most fertile, populous and improved land of Pennsylvania, for the last eighteen years. I discovered, in the interior of that state, land in the highest state of cultivation from the use of lime and plaister. I also discovered that land in a high state of cultivation a few years past, declining in its fertility; upon enquiry I found that they had

abandoned the use of lime, the most expensive, and depended upon the least expensive article, (plaister,) until their lands had become exhausted, and in some instances worthless for farming purposes under the plaister system alone. Many, in dispair, abandoned the use of plaister and commenced liming, and soon restored their land to its former fertility. While others, and the most experienced farmers, find lime and plaister in conjunction possess the most advantageous effect—the lime acting as food for the soil, and the plaister for the plant; the one to ameliorate the soil, the other in exciting it to action.

Most of the extensive farmers of Lancaster and Chester counties have kilns erected on their farms, collect and burn the lime stone at the most leisure season, at an expense not exceeding from six to ten cents the bushel, and put it upon the land at different seasons and for different crops, from twenty-five to a hundred bushels per acre; though upon worn out land about thirty bushels appears to be the most approved quantity. I commenced my experiment at thirty bushels per acre, upon a loam naturally good, though worn out; with twenty cart loads of stable manure upon adjoining land in the same field and condition, sowed with rye and timothy seed second week in September, clover first week in March following. Result —crop of rye from stable manure, twelve bushels per acre; crop of ditto from limed land, four bushels per acre, not ripe or cut for seven days after the stable manure, the rye injured with mildew and rust, as are most backened or backward crops. Grass on the limed land much the best, both as to hay and pasture; continued to increase, while that where the stable manure was put diminished.—Expense of each:

Stable manure, twenty loads to the acre, at one dollar the load on the landing, - - - - -	$20	00
Carting one and a half miles, five loads per day, team $1,50 per day, or thirty cents the load, - - - - - - - - - - - - - - - -	6	00
	$26	00
Thirty bushels of lime from Lehi or New Hope, delivered upon the same landing, at twenty-two cents per bushel - - - - -	$6	60
Carting one load - - - - - - - - - - - - - - -		30
	$6	90
Difference in the expense per acre - - - - - - -	$19	10

Thus you observe the difference in the expense of transportation of one mile and a half, almost equal to the whole cost of lime delivered upon the premises.

When manuring with lime, the first cost is incurred, and nearly all is said. I am well satisfied from experience of twenty-two years, of ashes and lime as manures, and from what I have seen for the last eighteen years, and experienced for five years, lime to be much cheaper and more durable for grain or grass than any manure that I have a knowledge of; I am however, fully satisfied, that it would

be better to procure either, than be employed in tilling land that gives a crop below profit; that is rather the amusement of folly than food for the purse.—However it may be within the means of the farmer to purchase manure, he must not forget that the *barn-yard is his moin, and his manure his gold dust!* We should not anticipate additional crops without the improvement of our soil, and to do that, it is necessary to secure grass and hay, as without stock no manure, and without manure no crop.

The art of farming is not an acquirement of a day, but of years, or rather a long life of experience; that which might be adapted to one farm advantageously, would be improper on an adjoining one, owing to difference of soil, &c. Book farmers, for want of experience, too generally lay down one general rule to be adhered to on all occasions. A physician might as well undertake to restore all his patients from an invariable course of medicine, however different their complaints or habit of body, as all farmers to restore their lands from one given course, however different might be their soil, climate, or locality to the different manures and price. Such manures and crops should be selected as are best adapted to the soil and climate, and a mature calculation of the expense in the cultivation and hauling to market, produce the greatest clear profit.

I am, very respectfully, your friend, &c.

B. B. COOPER.

Waterford, September 27th, 1825.

TO THE EDITOR OF THE AGRICULTURAL MAGAZINE.

CULTIVATION OF CASTOR BEANS.

My esteemed friend,

Having been favoured with the loan of the first number of *The New Jersey and Pennsylvania Agricultural Magazine*, I was pleased with it, and believe it will be an advantage to the enterprizing part of farmers. I send thee my ideas, founded upon facts, relative to the cultivation &c. of the Palma Christi, or Castor Oil Bean.

Having been engaged in the drug business for a number of years, I frequently was unable to supply my orders for castor oil of a good quality. I purchased a small farm in New Jersey—procured such seed as I could, and commenced manufacturer of the seed, as well as a cultivator of the plant. There are five different sorts or species of seed—four of which are different in the manufacture as to the result—I now allude as to quantum of oil and the quality—(relative to the manufacture, pherhaps I shall at a future period give thee my ideas, should it be agreeable)—the ground suitable for indian corn, is such as suits Palma Christi; but the poorest soil, if manured in the hill, will answer—it should be prepared as if for corn—the seed put into the ground between the 1st and 15th of the 4th month (April)—I find four seed to the hill sufficient, and when they are about six inches high, I pull up and leave but two plants to the hill;

they must be well and promptly attended, and if the season is favorable, will yield fifteen or twenty-five bushels to the acre—(I have paid $5 50 per busel, but at present, in consequence of the number of persons who raise them both in New Jersey and North Carolina—and the number of persons engaged in the manufacture of the oil, the price is from 1 75 to 2 dollars.) The last of the 8th month or during the 9th, or whenever any of the pods containing the seed become brown, (as they are green first) I have always cut the stem of the seed, which is from one to two and a half feet in length; they are then thrown into an enclosure, mine is 28 by 56 feet, with a morter floor; after remaining there a short time, they ripen and the hull snaps or opens, and the seed is then riddled or sived—and then fanned the same as other grain. The field crop is generally from five to seven feet in height, (my garden plants are eleven and a half) and the plants continue bearing until frost. Every prudent farmer, or rather cultivator, will not collect any of his seed after frost—which is easily ascertained by the plant drooping and the beans hanging down.

I have found persons who are unacquainted with the cultivation of palma christi, make a mistake which they do not seem sensible of—they plant too late in the spring, and they generally leave the hoeing or ploughing, until the corn or some other crop is done—which produces a great difference in the yield. As the castor bean is a native of a warmer climate than ours, it requires all the advantage of the rainy season—it must be attended. The seed that I prefer is a small speckled one, of which I send thee a sample—and when properly managed by a cultivator, will weigh 48lbs. to the bushel; but 45 is considered the standard weight—and I know some manufacturers who buy by weight as the most certain method. I have had seed which weighed only 33 lbs.

Respectfully thine,

CHARLES E. SMITH.

N. B.—For the next number I will describe the different kinds of seed, with some observations on their plants, so as to distinguish them.

Philadelphia, 9th mo. 24th, 1825.

FROM MEMOIRS OF THE BOARD OF AGRICULTURE OF THE STATE OF NEW YORK.

OBSERVATIONS ON FATTING CATTLE.

(BY A GENTLEMAN OF COLUMBIA.)

This subject offers to our consideration these points;—Can it be made a distinct branch of agriculture, with advantage to the farmer?—And what is the best and most profitable mode of attaining this object?

It is every where observed, that this business, on a small scale, or the feeding of a few cattle, is more for convenience than gain. Eve-

ry farmer wants, and it is presumed, provides his family with a sufficiency of this necessary article, the cost or trouble of which he seldom or never counts ; and most farmers have some cattle to dispose of in the course of the year—young stock that are supernumerary, some cows to turn off, and a yoke or two of old oxen. These must be disposed of at any rate.

Now we all know, that selling lean cattle, either in spring or fall is a poor business at best, even when they can be sold at all ; and the only way to obtain any thing like a fair price, is to get them ready for the butcher as early as possible. If they are in good pasture from the middle of May, to the middle of August, they will sell, as there is generally a demand by those who retail them in the country villages and towns : poor enough to be sure is the meat, but it goes by the name of beef. To keep on hand this kind of stock for three months longer, that is, to the middle of November, when the markets are so fully supplied, they will seldom pay for their keeping. As an article of Agricultural profit, it will never do ; as a matter of convenience and necessity, we must make use of it. If then, in a domestic way, this turns to so little profit, let us next examine whether, on a large scale, it can be made better. In the spring, lean cattle, as steers and oxen, may generally be purchased low, and in six months, being kept in good pasture all that time, they will be fat, or at least in good order. Now what have they cost? An ox, on the 15th of May, of moderate size, will cost, on an average, $25 ; keeping till the 15th November, will not be less than $1 per month, that is $6 ; expense of sending to market, 100 miles distant, $2 50 ; interest on the purchase money, including risk, at 10 per cent. is $2 50—then your ox has cost 36 dollars. He will not sell at that season for more than 40 dolls.—a poor profit indeed of 4 dolls. This article will then seldom answer, unless where land is at a low price, and very distant from market. I have known several trials made, and by attentive experienced farmers, who have, after a year or two, given it up.

Let us next examine whether winter stall feeding will do better. If cattle are in very good order, or half fat, the 1st of December, they may be made fit for market in three months, and feeding for that time will cost 24 dollars. If they are in ordinary store order, it will require six months feeding, which will cost at least 30 dollars. Now it is easy to calculate whether the price you will then obtain from them will pay the first cost, risk, interest, and expenses ; if so, stall feeding will do, otherwise not. My own experience has taught me that it will not do—others will judge for themselves.

These observations apply particularly to farmers at a distance from the city markets ; those who are near have the advantage of waiting, and watching the rise and fall ; not so with those at a distance. The inference from the observations made, lead to the conclusion, that stall feeding is not so profitable as is generally thought ; yet some able and intelligent farmers pursue the practice. How they manage, it would be very desirable to know. We, who have been unsuccessful, would be enabled to correct our errors and others would obtain information which they may otherwise search in vain. When the farmer or grazier undertakes to make

the fattening of cattle his business, the first pre-requisite is that he be a judge, and a good one too, of the worth of cattle in all their different stages, of which he judges by the eye and hand ; next he must have at command a capital in cash, to enable him to buy with most advantage ; and then he must have provided feed in sufficient quantity for whatever mode of feeding he undertakes. Fattening on grass, or in the stall, are the two modes of managing this business: on grass, the best way is to buy young cattle, particularly three or four years old steers in the month of November ; to keep them in the yard all winter, fed partly with straw and partly with hay, but so as to have them in good order in the spring ; and these cattle should not be of the largest sizes, rather middling, such as will come to about six hundred weight the four quarters, when fattened. Such may generally be bought for 20 or 25 dollars. They must have good pasture for four months, for if that fails the profit is gone. But as we cannot controul the seasons, in case a severe drought takes place the only remedy is a little grain, or rather meal, given daily. Provided they are thus fed, they will be ready for sale by the middle of September, and generally at this time, cattle of the above size are in good demand ; if kept later, the markets are glutted, and the price always lower.

The middle of September, such cattle, weighing 600 pounds the quarters, will not sell for more than 36 dolls. or 6 dolls. per hundred. They have cost, first 20 dolls. next winter keeping, hay 2 dolls. 50 cents, straw, 2 dolls. 50 cents, four and a half months grass, 4 dolls. 50 cents, interest for ten months on 20 dolls. at 7 per cent. 1 doll. 16—then the profit is about 5 dolls.—besides the risk. This is no encouragement, yet I make no more of it, and have often made less.

In pursuing this subject, we now enquire, what is the most economical and profitable way of winter feeding? We must first know what an ox requires to fatten him, suppose he will give 800 pounds of beef. It has been already said that he may be made fat in three months or one hundred days, if in good store order when put up. Let this time be allowed. He will eat, every twenty four hours, 14 pounds of hay, cost 6 cents ; half a bushel of potatoes, 12½ cents, and 8 quarts of Indian meal, 12½ cents; being 31 cents a day, or 31 dolls. for the hundred days. This I have verified by many trials ; and the interest 1 dollar and 75 cents, together making 32 dolls. 75 cents, which, added to the first cost, 25 dolls. then the ox has cost 57 dolls. 75 cents. If the beef is sold at 8 dolls. per cwt. in March, it leaves only 6 dolls. 25 cents profit. There are several other articles of food on which cattle may be fatted ; but the above is the most economical that I know. Oil cake is the quickest to fatten with, and where it can be had, it is advisable to use it instead of Indian meal ; the price is about 56 cents per bushel, and the quantity from 4 to 8 quarts per day.

To fatten an ox on turnips will require two bushels a day, with 10 lbs. of hay. Carrots answer well, but are more expensive still —cabbage the same. From all these we exempt premium cattle, and those made up for show. Sure I am that the feeder never gets paid, unless he is gratified with seeing his oxen dressed up with

ribbons and his name in the papers. It was told me as a fact, that one gentleman from Orange county, who had just sold in New York ten very fine cattle, being asked how much profit he made by these as they had been fed eighteen months, answered he had just made a loss of 30 dolls. a head, although they were sold at a high price. Where then go all the profits, for beef is still at a good price when cut up? The answer is, to the butcher, who realizes from 25 to 30 per cent. on good cattle. No wonder then that they make such ample fortunes, and that they wallow in wealth, while the poor industrious farmer plods along with very small gains indeed. I have only to add, that these observations are the result of experience and not of idle speculation.

FROM THE FARMER'S ASSISTANT.

PLOUGHING.

Mr. *Livingston* mentions an experiment made, by which it was ascertained, that dew, when evaporated is found to contain a rich sediment, that rainwater does not possess; and hence may be adduced a good reason for the commonly received opinion, that ground is most benefitted by ploughing while the dew is on.

In preparing for a crop, some lands require to be oftener, and some to be deeper, ploughed, than others. The stiff and clay soils require the most ploughing, and the gravelly soil the deepest. The more dry and gravelly the soil, the deeper it should be ploughed, in order to enable it to withstand the droughts of Summer; and the more stiff and clayey the soil, the oftener it should be ploughed, and also rolled, and harrowed, in order to reduce it to a fine tilth, and to raise in it that state of fermentation, each of which, in such soils, is essentially necessary for the growing of crops.

It may indeed be laid down, as a general rule, that every kind of soil should be in a finely pulverised state, before it is applied to the growing of crops; but some soils are much easier reduced to this state, than others. The light sandy soil is easily mellowed: It neither requires much ploughing, nor need the ploughing be very deep; but this soil essentially requires that what is not expended on it in ploughing, for the growing crop, should be laid out in manuring it.

Mr. *Young*, in his Six Weeks Tour, found that the average depth of ploughing sandy lands, in Great Britain, was four inches; of loamy soils, four and three quarters; and of clayey soils, three and a half. In Ireland, they plough considerably deeper than this.

Mr. *Deane* makes mention of a piece of land which was Summer-fallowed, and sown with rye. One part was ploughed three times only; the other part eleven times: The crop was all harrowed in at the same time; and the result was, that the product of the part which was most ploughed was about double that of the other.

It would have been well to have mentioned, what kind of soil this was; as this would have served to assist in pointing out the soils which are most benefitted by frequent ploughings. Generally speaking, it is believed that all the more obdurate kinds of soils are

most assisted by frequent ploughings and harrowings, and some of these, perhaps more than others.

Ploughing should always be done effectually. Of whatever depth the soil is to be ploughed, every part should be turned up, or loosened, to that depth. The furrows, therefore, should not be too wide; for, if they are, parts of the ground will remain unturned, or unloosed. In order that the ploughing be completely performed, the plough should run perfectly flat and be of the best construction.

FROM THE FARMER'S ASSISTANT.

MILDEW.

Mr. *Young* says that when the wheat stem has a particular cast of a blueish green, it is then affected with mildew.

Mr. *Marshal* directs, that as soon as wheat is discovered to be struck with mildew it should be cut; and that this serves to *prevent* the *effects* of the mildew; that wheat may be thus cut three weeks before the usual time of harvesting.

The grain in this case will be smaller than usual but will make much better flour, and the quantity will be greater, as the skin will then be found very thin. If the grain has attained its full size, tho' only in the milk, it is sufficient; it receives that nourishment from the stalk which serves to mature it. The green stalks of the wheat must be sufficiently dried before stacking; and when carted in they will be found bright and clear of the mildew, and will make good fodder.

Mildew is probably owing to a revulsion of the sap in the stalks of the wheat, occasioned by cool nights, when the atmosphere has become cooler than the earth, which in that case forces the juices upward too fast, and thus bursts open the stalks; as they are perhaps more easily split than those of any other plant whatever. The knowledge of this, however, points to no practicable preventative of mildew; all that can be done is to counteract its *effects*, as above directed.

In treating of mildew, we mean to be understood to speak of that disease of wheat which causes the stalks to become covered, in a greater or less degree, with a reddish substance, something similar to the rust of iron.

We have seen wheat which was in no wise affected in this way; but still of no value: being almost wholy destitute of grains of any size worth preserving.

This disesse we call *blight*; but, as we know of no means of preventing it, we shall content ourselves with barely mentioning, that we have seen its ravages most complete on intervale grounds, adjoining waters which occasioned a heavy fog in the morning. Wheat should never be sowed on such ground.

For preventing mildew, let wheat always be sowed sufficiently early, as this disease is usually much the most fatal to the late sown grain.

FROM THE YORK RECORDER.

CULTURE OF THE VINE.

This has become an object of great promise in York county.—Experiments have already shown that the vine will r ot only flourish in the poorer soils of this country, but that excellent wine can be made, and that raising vineyards will become as profitable as any other agricultural pursuit.

A portion of the land in York county, is thin and poor, commonly called barrens ; it has been proved that the vine succeeds well on this land ; and 20 acres of it, which can now be bought for from 6 to 10 dollars per acre, when planted with vines, and those at maturity, will be more productive to the owner, than 200 acres of the best land in the county. No capital is required in rearing a vine yard ; the proceeding requires only attention and perseverance.

Mr. Thomas Eichelberger, an enterprising citizen of this place, was the first who seriously commenced the cultivation of the vine with a view to profit. Having a ridge of slate land which run through his farm—he conceived the idea of turning it into a vine yard ; and he engaged a German emigrant, who had been a vine dresser, and wine maker, in his native country. To this man he gave a permanent interest in 4 acres of land, and its produce, which was set apart for planting with vines ; a small house was also put up for the working partner, near the premises. Mr. E. advanced the means of procuring the cuttings for planting, and other expenses, and also for the subsistence of the labouring partner, till the vineyard should become productive, when he was to be repaid.

Under this arrangement, in 1818, the 4 acres were planted, in rows with wide intervals, and those intervals were filled up in the following years, with the suckers, or sprouts which grew from the original plants ; these, therefore, are one and two years later than the first plantings. It required one hand to manage all this, and keep the grass down during the Summer ; in the Winter, the vine dresser was at liberty to work day's work where he could get employment. It will be observed that although the whole 4 acres were planted over in the beginning, yet only one third of the vines were set. These had the start of the others, and began to bear on the third year. In the vintage of 1821, Mr. E. made two or three barrels of wine, which was of a good quality.

In the vintage of 1822, he made eleven barrels of wine, and sold a considerable quantity of grapes. The oldest vines having now acquired strength, and the second plantings also beginning to bear, though yet in small quantities, he was able to make thirty-one barrels in 1823, besides selling grapes for perhaps $200. During the time that the grapes were ripening, the vine yard was crowded with visitors, all of whom bought more or less. This considerably diminished the grapes which were designed for the press. After three years Mr. E. had no more advances to make, as the vine yard produced enough to support itself. The profit rose from the sale of grapes ; of the wine made the preceeding year, and from sale of cuttings, at $30 per 1000. The wine of 1822, was sold in 1823, to visitors at the rate of $3 per gallon. It is difficult to compute what the profits may

amount to, in seven years hence, as the vines become more robust, they will produce more fruit, and this increase will probably continue for 10 or 20 years.—The oldest of the vines are yet in their infancy; and the vine dressers from France and Germany who have seen Mr. Eichelberger's vine yard, say, that it is more flourishing, and further advanced for its age, than any thing of the kind they have seen in Europe. It is no extravagant conjecture, that Mr. Eichelberger's 4 acres will, at the end of two years from this time, produce grapes to make 100 barrels of wine. This is what the vine dressers confidently assert. Mr. E. has, since the commencement of the first vine yard, planted two other portions of ground, of 3 acres each, contiguous to the other. For each of these he has a German vine dresser, to whom he has given an interest, as in the first case, but pays nothing else.

He proposes to extend this vine yard to 20 acres, though under different tenants; four acres being as much as one man can well attend to.

Mr. E. has also made two plantions of vines, on a farm about ten miles from York, in the very heart of the poorest land in the barrens. Those flourish, and promise as well as his first vine yard; though they are but two and three years old. The oldest bore grapes this season.

Judge Barnitz, and Mr. Nes, have each planted vine yards in the vicinity of York. They are but three years old. They made about two barrels of wine each. Last year they made each a small quantity, which after fermentation became very fine, and of an excellent taste and flavour. Competent judges are satisfied that these wines will be equal to the vines of France and Germany. Mr. Eichelberger has the Madeira, Lisbon, and Burgundy grape.

A German emigrant 15 miles from York, has made a vine yard on lands of his own. He has two acres, and it is four years since he planted it. This year he made ten barrels of wine.

Mr. Crull has made a vine yard on the side of a steep river hill, 12 miles from York. The hill has been cut into steps, and planted in the Alpine style. This also flourishes, and bore this season.

Besides these there are several more in the neighborhood; and preparations are making to plant at least 15 or 20 more in the ensuing year.

It is a matter of encouragement, that there does not appear to be much danger of a failure of crops, as Mr. Eichelberger has not perceived that the cold spring weather has injured vines. Last spring was unfavorable for fruit, so much so, that the peach trees, apple trees, and other fruit, were much injured; yet his vines did not suffer, except a particular kind of white grape appeared to be a little injured.

The wine which has been made, appears to contain sufficient alcohol to preserve it from acetous fermentation. Mr. E. has some two years old, which has been racked several times and is perfectly soured, although it has had nothing added to it, but has been allowed to depend altogether upon its own intrinsic strength. Mr. Nes, and Judge Barnitz, also have preserved their wine without any additional aid.

It should not be understood that the spirits which has got up among

us about raising vine yards, is of a speculating character, and therefore in danger of blowing out in a few years. It is bottomed on something solid and permanent, as much so as any other branch of tillage or agriulture. For those who make experiments, put no capital to hazzard ; they feel their way as they go, and enough is already proved to convince every one that the pursuit will be profitable. There is land of a suitable soil enough in York county, to raise wine for the consumption of all the United States ; and twenty years from this day, more wine will be made in Pennsylvania, than is now imported into it. When once a vine yard has come to maturity, the owner will be able to sell his wine at 50 cents per gallon, and have abundance of profit.

Most of the scites where vines have been planted, are on the sides of hills, with a gradual slope, and southern aspect ; though practical men say that they succeed equally well on the north side.

Observation and experience will teach, in due time, what kind of grapes will suit best to the soil and climate, and also how to manage the grapes, and the juice, to obtain the best wine. Mr. Eichelberger has sufficiently proved that both the white and red wine will succeed.

Many interesting considerations are suggested by the successful cultivation of the vine in this county. In a moral, satistical, and national view it is important, and will be hailed as one of the greatest acquisitions that has been made to our domestic economy.

Note. Since writing the above, I have been informed that Mr. Overdorff, who has a very flourishing vine yard, raised his plants from the seed, which were sown in a bed in the garden, and, after one year were transplanted. Having roots, they are not so liable to fail, as the cuttings, which are joints of a vine, one end of which is stuck in the ground.

FROM THE MEADVILLE MESSENGER.

HOW TO MAKE CIDER.

As the season is approaching for the making of *Cider* it may not be unprofitable to give some directions to those who may engage in it, as to the best mode of making it. Good cider is so delicious a liquor, and bad cider is so paltry a one, that if care will produce the one and avoid the other, it will be well bestowed. Let the mill, the press, and all the materials be perfectly sweet and clean, and the straw free from must. Apples not ripe at the same time, should never be mixed. Apples which fall fully ripe, make better cider than those which are shaken; they should be all kept till perfectly mellow. The flavor is supposed to increase as long as the fruit continues to acquire a deeper shade of yellow without decaying. All rotten or decayed apples should be picked out before grinding. The strength and flavor of cider are increased by keeping the fruit under cover before it is ground; but it must be exposed to a current of air, and spread thin, or it will contract an unpleasant smell, which will affect the taste of cider.

The fruit, in grinding, should be reduced, as nearly as as possible, to an uniform mass—the advantage which cider receives from the perfect grinding of the rind and seed, are well known, but not so well understood. By the mechanical operation of the nuts, the various fluids which occupy the vessels of the fruit, are mingled with the juices of the rind and seed, and with the macerated substance of the cells themselves. If the juice of an apple be extracted without bruising the fruit, it will be found thin and defective in richness, compared to the juice of the same apple, extracted after it has been some time exposed, in a bruised state, to the influence of the air and the light; it then becomes deeply tinged, less fluid and very rich; in the former state it apparantly contained but little sugar; in the latter a great quantity; much of which has probably been generated since the fruit became bruised; though it may be difficult to explain satisfactorily, the means by which this effect was produced. In the operation of grinding slowly, the liquor acquires good qualities that it did not before possess. The pomace should remain in the vat twenty-four hours previous to being pressed. If the apples be good, the liquor will thereby become more saccharine, and be improved.

FROM THE BRATTLEBOROUGH MESSENGER.

I once lived with an Englishman who had been a wine and spirit merchant, who had the best cider of any man I almost ever knew. He used to manage as follows:

All rotten apples were rejected—the mill was perfectly sweet and clean and the cider very carefully strained, so that the smallest bit of pulp was stopped.—He preferred fermenting his cider in tubs shut; if that could not be done, he narrowly watched the barrels to keep them full, and as soon as it had done working he racked his cider off into other casks after he had most thoroughly cleaned them, which he did with scalding hot water, putting the vessel upon a bit of wood to give it more play and then putting a piece of chain into the cask and worked it well, repeatedly changing the water. After the inside of the cask was pretty dry he stummed it, as he called it; that is, he took strips of old linen cloth twelve inches long and two broad and dipped them into melted brimstone; one of these he suspended in the barrel, on a wire, and set it on fire.—After this he put a few pails of cider in and worked it well to mix it with the fumes; then he burnt another match and worked it again. He did nothing more to it but bung it up tight until late in the winter, when he racked it into a brandy hogshead which he stummed as before, then bunged it up, and as the spring opened he fined it. His cider was a delicious drink and kept years. He used to say to have good cider we must have no rot, no must or sourness, nor sediment left in the cider, and spirit enough to keep it, no acid fermentation and he thought nothing could prevent this in this hot climate but brimstone.

To the above observations I would add, that the larger the cask the better the cider.

Cider brandy, if good, it is believed, will do well in keeping ci-

der—But TAKE NOTICE—cider brandy that is reduced with *low wines* is not good for cider; but will tend to injure it very much; this farmers should particularly attend to—About one gallon to a barrel is said to be sufficient. A.

FROM MEMOIRS OF THE PHILADELPHIA AGRICULTURAL SOCIETY.

Remarks on the great damage done to Apple Trees by erroneous Pruning, by the Rev. Dr. Nicholas Collin.

Read, October 13, 1812.

Philadelphia, September 25, 1812.

Dear Sir,

Desirous of contributing my small aid to the pursuits of the Agricultural Society, I present some remarks on the pruning of apple trees, the communication of which may be useful to the public, though not to persons well skilled in horticulture.

I have the honor to be, with great esteem,

Dear Sir, your most obedient servant,

NICHOLAS COLLIN.

Dr. JAMES MEASE.

Secretary of the Philad. Agric. Soc.

Apples being the principal fruits in the greater portion of the United States, merit particular care. I shall confine my observations to them for the present, though in part also applicable to other kinds.

Mismanagement often begins in the nursery, by leaving suckers from the roots, by letting the trees grow so crooked as to become incapable of a good shape, and, especially, by leaving branches for two or three years, which must be cut away when the tree is planted, because they are too low, or crowd the head. This incumbrance has wasted a great part of the sap, which would otherwise have increased the regular growth. The wounds occasioned by this lopping cannot soon be covered with new bark, and in the mean time often produce a decay. Sometimes this neglect is continued in part, when the trees are removed from the nursery, because some persons regret the loss of branches which would bear the same on the next year, and others cannot foresee the bad consequences of keeping them, which will increase with their growth, and force a much worse amputation. The head of every tree should begin at least six feet from the ground; and of those whose branches are sloping, eight. When the head has been formed so low as five feet, but is well grown, it may be continued, but then its branches ought to be trimmed near the stem, and by some contrivance be enabled to rise. The head to have but one leader, because two seldom succeed, as the inward lateral boughs will cross each other. Its branches should be equidistant, and not more than six, nor less than four. If the tree has ample root, and a strong body, the head may retain an upper tier,

provided it is two feet above the first; but if not, it is best to leave only such upper branches, that have this height, and form the others from good buds. It is a bad practice to shorten the top or branches, except a little when they are too slender for their length; by excess, it may be very difficult to procure a good leader; the branches will grow bushy, and be later in bearing, because the first fruit comes towards their ends.

Trees are not to be kept too long in the nursery, because the small space allotted for them will not permit a regular expansion either of the root or the branches; besides, the removal, however careful, often kills them, or causes a lingering decay. An accurate inspection of the roots is necessary, for taking away any carious parts, and worms, and also for cutting off those that cross each other, or are too close. None but long ramblers ought to be shortened; and they should be spread equidistant, so far as is practicable, which may be facilitated by wooden pegs. The too common fault of squeezing them into small holes, has ruined many trees; they must be wide enough to extend at least one foot beyond the limits of the longest roots, and the mould be made quite mellow.

A tree well pruned, planted, and secured by stakes against violent winds, requires frequent attention for some years:—the sprouts that come from the places of the removed branches, must be rubbed off at their first appearance; so likewise all that would produce irregular boughs, whether crowding, crossing, or shooting too upright from the regular branches: new tiers are to be formed at proper distances, as the trees advance: moss, insects, and any filth must be scraped off without damaging the bark: the roots must also be examined near the surface of the earth, as worms have lately been observed to corode the bark.

When a tree has by this management acquired a habit of regular growth, it will be easy to keep it in good order.

When, by neglect, irregular branches have become large, as beyond a diameter of two and a half inches, it is unsafe to cut them off, but some of their smaller boughs may be removed. If they gall others, the amputation cannot be avoided, but healing plaster, and good covering should be applied to the wounds.

Many persons are so stupid as to mangle regular and healthy trees, on the pretence of making them better by thinning; lopping off branches thicker than their own arms and legs, moreover, lacerating the parts; and leaving them exposed to all the injuries from heat, cold, wet, and insects, and thus a certain prey to gangrene. Saving the stumps will not avail, because they convey moisture and frost to the stem, even before they rot. In a few years, large holes appear in the body of the tree, the remaining branches become sickly, and produce bad fruit, and a premature death is generally certain. Often have I, with indignation, seen waggon loads of the finest branches, full of bloom-buds, in the spring, brought from the orchards by such senseless wood-choppers!

A regular position of the branches round the stem, will give to the inner parts ventilation, and admit sunshine, without much thinning. It will also by a balance of weight, keep the tree upright, and enable the several parts to resist violent winds, and to support loads of fruit.

Clusters of limbs on one side must incline the tree more and more, so as to be easily torn up by the root, and also weaken the hold of these branches to the stem. Indiscreet pruning of the inner parts will accumulate the fruit on the outward, and thus make the weight more powerful, as on a lever.

The importance of good pruning is additional in this country, from the frequency of westerly winds, which give a contrary bias, and from the irregularity of the seasons, which in some years causes a great defect, and in others an excess of apples. A striking example of this happened in the autumn of 1810, when a vast number of trees lost many of their branches, and many in a leaning posture were torn up, owing to the admirable quantity of fruit, without any uncommon gales.

FRUIT TREES.

Should the following easy method of propagating fruit trees, which we copy from an Oswego paper, prove generally successful on a more extensive practice, it will be a valuable acquisition to the farmer desirous of enriching his farm by a choice selection of fruits, by means of which he would be enabled, with very little expense, to raise his own trees from the best species of every variety. As an experiment would be attended with no expense or risk, and with but little labour, we think it worth a fair and judicial trial.

The new method of raising fruit trees by planting the *Scions*, is a great desideratum in the art of obtaining choice fruit. It has many advantages over grafting, because it is more expeditious, and requires no stalk or tree. They may be planted where they are required to stand; and the labour of a man for one day will be sufficient to plant out enough for a large orchard, after the scions are obtained. The method of preparing the plant is as follows:—Take the scions for each grafting, and at any time after the first of February, and till the buds begin to grow considerably, and dip each end of the shoot in melted pitch or wax, rosin and tallow, and bury it in the ground, the buds uppermost, whilst the body lies at a horizontal position, and at the depth of two or three inches. We are informed that trees obtained in this way, will bear in three or four years from the time of planting. We have no doubt of the practicability of this method of raising fruit. Doctor Paige, of this village, planted about twenty scions of diffierent kinds of pears, the middle of last month, two of which are now in blossom at the surface of the ground, and appear flourishing! The composition he used, was melted shoe-maker's wax.

FROM THE FARMER'S ASSISTANT.

SUNFLOWER (*Helianthus.*)

It is found that the seeds of this plant afford an oil equal to that of the olive-tree; and it is said that seventy bushels of this seed may be raised from an acre. The plant will grow in almost any

soil that is sufficiently strong. The seeds are good for feeding poultry during the winter season.

From a bushel of this seed, says the Editor of '*The Watchman*,' a gallon of oil, as fine as that which we import from Florence, may be obtained at any time, quite soft, bland, and fresh; and the mass that remains after pressing out the oil, is of excellent use to feed hogs, poultry, &c. He further observes, that the inhabitants of unwholsome places should be diligent in cultivating this plant, on account of the vast quantity of oxygene gas which it produces; it having been proved that near twenty times as much of this gas is produced in twenty-four hours by one plant, in light and clear weather, as a man respires, in an impure atmosphere, in that space of time.

The Editor of the '*Emporium of Arts*' has also noticed this native American plant, at considerable length; and suggests, with others, who have made trials of it in England, other valuable uses to which it may be applied; such as the fibres of the bark and skin, as a substitute for hemp; the stalks, when green, for the purpose of wattling, &c. and when dried, as an article of fuel; an acre yielding from three to nine waggon loads; the pith as affording good tinder, and the leaves, when green, as excellent food for rabbits, and serving for litter when dried.

There are eight kinds of this plant as enumerated by *Mr. Green*, in his Catalouge of American Plants; but the largest kind is recommended for culture. It should be raised in rows, and cultivated in the manner of hoed crops. It is easily raised, and gathered; the crop is a very sure one, and subject to little or no injury from rains, or otherwise, if left standing for some days after it is fully ripe. It, however, does not ripen all at the same time.

The oil is extracted from the seed in the same manner as that of flaxseed; it answers well for printing, and for painting; and the cake is good for fating cattle, beside the uses before mentioned.

It is belived that the culture of this plant, on an extensive scale, would be found very profitable.

FROM THE BUCKS COUNTY PATRIOT.

ON BEES.

Messrs. Editors—Having observed in your columns a question by *Apiiarus* on the subject of Bees, wishing to be informed as to the best method of procuring the honey without destroying the insect, though much engaged, I will communicate my experience, not only as to the best manner of getting the honey, but also of nursing the Bees; and should you deem it worth insertion, perhaps it might benefit the community.

In the first place, I inveigh against the practice of leaving them exposed to all weathers, as extreme heat or cold is like injurious to their increase—which may be avoided with very little expense. And that it may be properly done, it is necessary to have a close frame, fitted up with shelves, to keep them through the winter or

season of rest, which is from about the first of November in common seasons, but sometimes later, until about the first of April, when they should be removed to another, open in front, and fitted like the former, only that the shelves must be wider apart, and particular care must be taken that the hives are sheltered from the meridian sun of summer, as I have known the honey melt and fall through excessive heat, and this is the true cause why the Bees collect in clusters under the hive.

If Bees are attended to in this manner, they will swarm much earlier than common, as the whole stock is preserved; and by pursuing the old method of killing them, the increase will be nearly double that of those that are exposed. But as this appears cruel in the extreme, I think it desirable that another and a better plan be devised; to wit: At the time the bees are hived, let two hives be prepared instead of one; the upper one to be about half the size of the lower, or about one foot or nine inches square; each to be made of pine: the one to have an inch hole perforated in the top, through which there will be a communication to the upper hive or box. They will fill the top hive first, and when they have began to work in the lower one, the top box may be taken off, and the hole stopped up, and no fears need be entertained with regard to their not being able to lay up sufficient store for the winter, as early swarms generally have their hives full by Midsummer. This plan may therefore be pursued with all early swarms with safety; but a different one with late ones; one hive is sufficient for such, and they have enough to do to provide for themselves. Let these remain unmolested until about the first of July of the next summer, and be dealt with as old hives; although it is better to preserve a few of those for breeders, as they increase much faster than young ones. The plan pursued is this—Give the bees a new house for an old one, that is, drive them out of their old hive into another, it matters not whether it be old or new, so that it is clean; as every person who knows any thing about Bees, knows they don't like dirt. This may be done by the mild smoke of old rags or corn cobs, which will cause them to remove, but do no material injury. By pursuing this plan, you will find that instead of 6, 8, or a dozen hives, your stock will be increased in a few years to fifty or a hundred, and consequently your quantity of honey will be increased; which will abundantly compensate you for all your trouble, as well as save you the unpleasant task of destroying those useful creatures.

AMPLIFICATOR.

FROM THE NATIONAL INTELLIGNCER.

THE HESSIAN FLY.

There are various conjectures respecting this fly.—Some suppose one thing and others another. The writer, to ascertain the identical and exact fly, pursued the following plan: Their eggs were carefully taken from the stems of wheat stalks, early in harvest, last summer,

(some in the white, and others in the flaxseed state) and put into a glass tumbler with a paper covering, and tied with a string, carefully, to prevent the animals from escaping, and others from entering in, puncturing holes in the paper to admit air. In a short time thereafter, a little worm, or eruca issued therefrom, with a white body and yellow head; and some peach paring introduced in the tumbler for them to subsist on; which continued growing and feeding on the peach-parings, until they came to maturity, and then they webbed or coned themselves up and became an Aurelia or Chrysalis, in which state they remained for some time, from which eminated a small variegated fly, with every characteristic of the family of the butterfly tribe, with black heads, and two feelers, or antenneæ, issuing therefrom, with a body of about a quarter of an inch long, the wings of a reddish hue, and the back a grey color, and of an active disposition.

They lived until the last of the fall, and then died, whether for want of sustenance or the want of fresh air, (as they had nothing to support them but the aforesaid dry peach-parings,) or whether they lived out their natural term or not he knew not.——So we find, what was considered the hessian fly, turns out to be a small butterfly! and perhaps an aborigne of America, and not imported, as generally thought by many.

Suspecting that, after harvest, as the wheat stubble became dry, and perhaps not affording sufficient nourishment for them, in the worm state, and a crop of carrot weeds generally succeeding a crop of wheat, they betook themselves into the stems of that weed, induced the writer this last fall to examine it particularly, and by doing so, he saw just such worms in the stems of them, with similar white bodies and yellow heads, and of the same length, which induced him to believe it is one of their natural abodes, after harvest, until they become a Chrysalis, and thence a butterfly, as above stated; but the latter is all conjecture.

FROM MEMOIRS OF THE PENNSYLVANIA AGRICULTURAL SOCIETY.

RURAL ECONOMY.

Oxen.—The following is an extract of a letter from the Hon. Levi Lincoln, to John H. Powel, Esq. dated Worcester, August 3, 1824.

You inquire the mode of breaking, feeding, and working our oxen. The best broken oxen are those which are early trained and accustomed to the yoke with occasional light work. They are often broken as early as at one or two years of age, with gentle and patient usage. At this period they are more docile and tractable, and it is thought become more powerful by being sooner accustomed to each other, and in the application of their strength to the draft. I believe they may be made to travel in almost any gate; certain it is, the rate at which oxen differently broken will walk with their load, would seem incredible to a person ignorant of the difference in the mode of their training. To accustom them to a quick pace,

they should at first be driven in the yoke while young, without any, or with a very little weight, never very heavily loaded, until they have arrived at full strength and maturity. A great fault with many people is too much indifference to the *construction of the yoke.* Almost any shapeless piece of wood, with holes for the insertion of the bows, is made to answer; but to the ease of the draft, the adaption of the yoke or bow to the neck of the bullock, and the position of the staple and ring in the yoke are altogether material. For common use, and particularly for ploughing, I have found yokes were generally too short. Cattle of the largest size require a yoke from four and a half to five feet in length. In short yokes, they are apt to *haul,* as it is called, that is, draw *from* each other, and to such a degree in some instances, as to cross their fore legs, and destroy their power and greatly impede their progress. I once owned a pair of cattle made totally useless by this habit, and afterwards entirely corrected by the application of a yoke of eighteen inches more length. A short yoke is necessary only in snow paths, where cattle would otherwise *crowd* against each other, the opposite of *hauling,* but of the same mischievous effect. The value of a yoke of oxen or a pair of horses for use in all the business of a farm admits of no comparison. So decided is the preference for the former, that I do not believe a single farmer can be found in this extensive agricultural county who performs his labour by horses without oxen, while there are hundreds, I had almost said thousands, who make no other use of horses in husbandry, than to furrow for planting, and plough among their corn for hoing.

Next to Merina sheep, I consider the introduction of the short horns, in the blood of Denton, as the richest acquisition to the country which agriculture has received. For the dairy and the stall I speak with the utmost confidence of their pre-eminence. From my three years old heifers I have calves of the most promising appearance, and greatly excelling any I have before seen. One of the heifers gives from sixteen to twenty quarts of the richest milk, by the day, since calving; the other a little less, from the circumstance of having been in milk continually for more than a year, but her milk is in no degree inferior in quality. The last season she gave eleven quarts at a milking with grass only, and this not unfrequently. They keep as easily as the native stock and are as hardy.

The estimates of the relative expenses of keeping a pair of horses and of oxen, is in the proportion of three for the former to two for the latter, and to this is to be added the value of the ox for beef when his strength fails for labour. If your farmers should once be induced to substitue the ox for the horse in their ordinary business, it could not fail most essentially to advance their interests.

FROM THE BRIDGETON WHIG.

A great error prevails among many of the farmers in this country, in the making of Hay, and in the curing and preserving of corn

stalks. Grass looses much both in quantity and substance by too much exposure to the sun whilst curing: and corn fodder much more when exposed in small bundles; both, but particularly the latter, are injured by heavy dews and rains. Our grasses can for the most part be sufficiently cured for hay in good weather, without being shaken from the swarth.—After laying one or two days in swarth, (according to circumstances and the kinds of grass) it should be raked and put into small cocks in the hot part of the day, and remain there until cured for housing.—After curing, if it be carted and housed during the hot part of the day, whilst heated by the sun, and a little salt be added to each layer as it is put into the mow, it will make excellent hay. Salt prevents mildew, and renders the hay more grateful and more beneficial to cattle. Clover cured in this way and salted, will retain much of the colour of its blossoms and leaves.

In order to make good fodder from corn stalks, they should be cut down close to the ground with the corn on them in the month of September, when dry and the weather good, and immediately put into small shocks in the field, for the purpose of allowing the corn to ripen, and the shocks to cure. In about five or six weeks the corn will have ripened and became dry, it is then to be gathered. This will require more time and labour than the common method, but the farmer will be amply repaid for his trouble, in the excellency of his fodder and the quantity of manure made from them. The stalks will be found completely cured, retaining much of their green colour and filled with saccharine matter; the blades and husks remaining on them are greedily eaten by cattle. After the corn is gathered, they should be carted home and housed; if this cannot be conveniently done, they may be placed in large shocks in the field, well tied up, to preserve them from the weather. As soon as the farmer begins to fodder his cattle, the stalks should be *first* fed out, as it is necessary when stacked out, that they should be all consumed or taken to the barn yard by Christmas; if left beyond that time exposed to the winter, they became injured; and unless foddered out early, they are not sufficiently rotted for manure in the spring. When cured in this way without being damaged by the winter, I consider them preferable to any hay, except good red clover.

I am sorry to add, that although corn stalks are carefully preserved by many of us and turned to profit, both as an article of food and manure, yet there are numbers in this country who suffer them to remain through the winter, exposed to the influence of the sun, air and frost; or their half starved cattle are turned in, to trample upon and gather a scanty living from them. Thus, instead of converting every thing into manure, and making a liberal return to the soil, they take every thing from it, and thereby produce a complete barrenness of soil; to this cause may be ascribed the ravages made on our woodlands, and the outcry about old fields and worn out plantations.

I am sir, your obedient servant,

WM. ELMER.

Extract from an address delivered before the Salem County Agricultural Society, in the town of Salem, on Tuesday the nineteenth day of April, eighteen hundred and twenty-five, by ROBERT G. JOHNSON, ESQ. PRESIDENT.

* *

Perhaps I may be thought as hazarding my opinion in saying that what may be considered the cultivated lands, and lands susceptible of cultivation in this county, might be reckoned as lying within the bounds of fourteen or fifteen miles square. From within these bounds the average exportation from the surplus productions of our farms for a series of years have been of the following articles:

Of Wheat - - - - - - - -	30,000	bushels,
Corn - - - - - - - -	100,000	"
Oats - - - - - - - - -	50,000	"
Rye - - - - - - - - -	10,000	"
Flax-seed - - - - - - - -	2,500	"
Pork - - - - - - - -	500,000	lbs.
Beef about - - - - - - -	400,000	"
Fur - - - - - - - - - -	8,000,	
Number of Calves varying from 600 to 1,000 head, say - - - - - -	800	head
Sheep about - - - - - - -	2,500	head
Castor Bean Oil 100 blls. of Oil equal to - - - - -	$4,000	at the present reduced price of that article.
The total amount of all those articles annually exported from this county will be	$152,300 fur 8,000 $160,306	

But as those articles have materially declined in value it becomes the agriculturalist to turn his attention to some other products from the soil besides those enumerated, which would probably assist in rewarding his labours more abundantly. I would therefore most respectfully suggest to you gentlemen, the propriety of attempting the cultivation of Tobacco and Cotton. I am persuaded that the Tobacco plant might be raised here to as much if not greater profit, than in Maryland, because, our rich soils, and particularly our best drained meadows are very far superior in quality to the land on which the planters there grow their Tobacco, or in Virginia.

As to bottom, I am of opinion, that the same soils would produce it as luxuriously as they now do the Castor bean. A small quantity had been grown formerly in the township of Elsinborough, and it was cultivated in the neighbourhood of Germantown the last season by a gentleman resident there from South Carolina, and I was lately informed that it was grown on Long Island, and that it was of a good staple.

But as a certainty for the augmentation of profit to the farmer (and without having an experiment) those extensive marshes which are

now covered with tide water, and when reclaimed, would yield certain and large profits to the owners by cultivating them in Flax and Hemp; particularly as labour saving machines have been lately invented by which those articles may be prepared for the market at much less expense than the ordinary way. Already are there large quantities of sail cloth of a very superior quality manufactured in the town of Paterson, in this state, from the flax grown principally, (as I have heard) from Somerset and Hunterdon counties, the soil of which is very inferior to that of ours. As auxiliary thereto—at the head of our tide waters, we have numerous mill streams, on which might be erected manufacturies, where the flax and hemp which might be grown on our meadows and uplands, could be advantageously manufactured, especially, as machinery has been lately invented for the spinning of flax on an extensive scale.

Most of you are well acquainted with the productive nature of our good marshes, how that, when they are well drained, will yield an exuberant crop of wheat, corn and rye, as well as large products of all the different improved kinds of grasses. I am of opinion, that were the farmers to turn their serious attention to the growing of flax and hemp, that those articles might be raised in such quantities, as to amount to a greater value than the annual exportation of our wheat. As such, no doubt would be the case—behold, fellow citizens, what a wide field is now opening for the enterprize and industry of our farmers!

Remember, it was but a few years ago, that the castor been, considered as of no value, was known among us as a very rare plant, now and then it was to be seen only in gardens—a solitary stalk or two planted as mere curiosity; but now, by the activity, enterprize, and discriminating judgment of a few of our worthy farmers in the township of Upper Penns Neck, a Mr. Lewis Green has introduced the castor bean into his fields, and by his example some of his neighbors have been induced to go into the cultivation of that plant, and having also erected an Oil-press, he has manufactured about 200 barrels of oil from the bean since the press has been set up only two years ago—(and depreciated as much as the price now is) the quantity of oil expressed the two last seasons amounted to above 6,400 gallons, equal to at least 8,000 dollars, the present value of that article.

Here, gentlmen are exhibited to you the exertion of a few individuals—and the profits of the productions of their farms, from a plant which but a few years ago, was considered as *altogether worthless.* I have suggested for your serious consideration and experiment, *those different kinds of plants,* so well suited to our soils, for a profitable cultivation, hoping you will give them all a fair trial—I have no doubt as to the result.

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Gentlemen, having now given you my views of rural economy at the formation of this society—let us endeavour to excite a benevolent spirit of enjoying it among such of our neighbouring farmers, who have not as yet seen their way clear of uniting with us, by unfolding to them the utility of such an institution. The agriculturalists or

farmers are now assuming that rank among the other citizens of the Union which they have too long delayed to assert. Other classes of citizens have long ago formed associations for their mutual benefit, support and interests—such as, the Clergy, have their meetings, associations, conventions, presbyteries, synods, &c. &c. The Lawyers, have their law societies—the Doctors their colleges of physicians—the Merchants, their chamber of commerçe—the Freemasons, their lodges—the capitalists or monied men, their banks and insurance offices—the mechanics and tradesmen, their several associations;—while the farmers, (until some few years ago) had been considered so low on the graduated scale of mankind, as not entitled to assume such distinguished privileges.

Yes, gentlemen, it *does* become the agriculturalists to form societies—that in the mutual interchange of sentiments respecting their concerns—they may learn from each other their true interest; and so to systematise their institutions, that they be the means under Providence, and their indefatigable exertions, of producing health, industry, morality and independence among all classes of our fellow citizens.

The truth is, that the agriculturalists are the very bones and sinews of any government;—no government could exist any lenth of time without their energies.

Let me ask the question—were these United States about to be invaded by an enemy—where would the government look for defenders? I answer—to the hardy yeomanry of our country. Does the government want oxen, horses, and forage for the army? Your fields, meadows, barns and store houses supply their necessities. Does the government want money to defray the expenses of the war? To your families, houses, lands and stock does it resort in the mode of taxation either direct or indirect to supply the exhausted treasury. But, gentlemen, the agriculturalists know how to appreciate their rank with the other citizens of the Union. They have learned that some of the greatest men that ever lived in ancient times were farmers—Such as Homer, Lucian, Licurgus, Socrates, Plato, and others that might be mentioned.

The great Cincinnatus was a farmer and followed his own plough;—and if we descend to our own time for an example—I would call to your remembrance, that truly illustrious, though deceased political father of our country—yes, the great Washington was a farmer, and a good one too. After having largely contributed by his exertions in the formation of the republican institutions of our country—directing the complicated and untried machinery of the new government for the term of eight years,—he quietly descended to the shades of his peaceful Mount Vermon, and there gently breathed out his life on his own farm justly esteemed as one of the best and most virtuous of farmers that ever lived. A truly illustrious and laudable example to us and to all agriculturalists for succeeding generations.

FROM THE TRUE AMERICAN.

Alexandria, Hunterdon county, Aug. 2d, 1825.

Mr. Prall—About eighteen years ago I received from a friend,

the following recipe for the cure of the Yellow Water, or Niagara distemper, a disease prevalent and very destructive among horses. For the last ten years I have had occasion to apply it in two cases to my own horses, and in many cases to those of my neighbors, and its success has been almost invariable. I have thought proper to offer it to the public through the medium of your paper.

Take two oz. Antimony,
two oz. Salt petre,
two oz. Cream tarter,
two oz. Flour sulphur,

powdered and mixed together; a table spoon full given morning and evening on a little mixed feed. Before you commence, bleed the horse from the neck, not more than a quart, which, let stand in a glass till cold, by which you may asscertain the disease. The largest part of the blood will become a yellowish jelly, a little tinged with green on the top. The horse also, in most cases, becomes a little stiff in his limbs, and droops his head and ears. His eyes dull, with a little matter in the corners—and will eat but little. A pound of salts given the night previous, is of service—the feed to be light and of a cooling nature; wheat bran and a little ground oats is recommended.—Tea made of Sweet Fern for drink, and wetting the feed —at the end of five days, take a little more blood from the neck, and if it is not materially improved, repeat the above: but do not bleed any more. For six or eight weeks be careful not to use the horse so as to strain or heat him, nor let him get wet; even for a longer time moderate usage is recommended, to prevent a return of the disease.

I am, Sir, your friend, &c.

JOHN DUCKWORTH.

FROM THE WILMINGTONIAN.

FITS IN CALVES.

The Ithaca Journal speaks of the death of a calf apparently in a fit. On opening it, a *hair ball* was found in its intestines, "two inches in diameter and six inches in circumference; of a solid and regular formation, round and flat at the ends. It was cut open with a sharp instrument, and a number of very small worms were found in the centre of the ball. We have heard of hair balls of considerable magnitude being found in the intestines of calves, as well as full grown catttle; but such instances are rare, and we have never seen the formation of those balls accounted for, on any rational hypothesis."

The writer of the above article appears at a loss for a rational hypothesis which may account for the formation of hair balls in the intestines of calves or grown cattle. It is well known that these animals are fond, at times, of licking each other, and will stand for half an hour in the most affectionate manner thus occupied: this more frequently takes place in the spring of the year when the hair is loose, which being taken into the mouth, is collected and swallowed

in the form of a cud, and being indigestible, if too large to pass off through the intestines, will remain in the maw or paunch, where it acquires the form of a ball. Calves are extremely fond of hair; this was exemplified to us in a case which came under our immediate notice. The calf was so fond of hair that he attacked the tails and manes of the horses on the farm where he belonged, which he completely succeeded in eating off; giving, as may be supposed, an odd appearance to the animals and no small mortification to their owner. We have found hair balls in pasture fields where they had fallen from cattle whilst grazing, varying in size, from a pigeon's egg to a half grown walnut with the bull on, and very hard.

It has not been long since some credulous persons in New England believed that these balls were the work of witches! and unpon the death of their cattle were never at a loss to find the witch who had done the mischief; hence the term *"witch-ball,"* by which they are known in those states.

FROM THE ALBANY PLOUGH BOY.

THE MORAL PLOUGH BOY.

"In the morning sow the seed, and in the evening withhold not thy hand."

The words of our motto were probably addressed by an eastern monarch to those of his subjects who followed husbandsy, and to whom the importance of early rising was the greater, as the climate was excessively warm, and the stoutest labourer found the noon tide heat too powerful for the energies of his frame to encounter. This is the case in most of the oriental climes where the morning and the evening are improved by the cultivator of the soil, as well as the man of business in every class, cast or profession. The middle or hottest part of the day is, in those countries, given to ease and relaxation; and the charms of conversation, are then the substitute for toil and care. But the time thus spent is not lost, because they attend strictly to the advice of the sacred moralist, and make it up by the fidelity of their morning and evening labours in the field, the work shop or the counting room. Besides the earth is there more prolific than in colder climes, like ours, and to less labour yields a greater supply ; and more abundant harvest.

But abundantly as the earth yields her products, under an oriental sky, still it was there that man was first taught by his maker, that she would not yield them without the sweat of the human brow. Implicit obedience was the first law given to our progenitors in Eden, as the condition of enjoying life without labour, of being surrounded by the perpetual verdue of spring, and regaled by the never dying fragrance of its odors; but this fair condition was violated, and they were doomed to know, that fruitful as the earth had become from the hands of its creator they should cultivate it with toil and care, and anxiety, before it should yield them the means of enjoyment and subsistence. But for one fatal mistake, they would never have been called upon to sow their seed in the morning, and at evening to watch over it with a careful hand.

We have seen that the first plough boys were obliged to work early and late ; and their successors in the same climes, are still subjected to the same diurnal labour.

But the American plough boy enjoys a milder climate and may perhaps think himself less obliged to rise with the dawn of day, or pursue the labours with the declining sun. He may perhaps flatter himself that the morning may be spent in a neighboring bar room, and the evening at a shooting match or a horse race, and the day still afford him enough for all his labour that he may have to perform. But this is an error, to his present, as well as future happiness. The mid day beams of the sun are not so fierce on the hills and valleys of America, as on the plains of Asia, where our first parents were doomed to earn their bread by the sweat of their brow. But they are still fierce enough to make the plough boy feel their enervating effects, and to press upon his physical as well as mental frame the necessity and importance of sowing his seed in the morning, and of extending to it the vigilance of his hand in the evening.

If our American plough boys would one and all adopt with energy and perseverance this injunction and oriental wisdom, how different would be the face of our country, in many places from what it now is! How many orchards would be planted ; how many fruit trees of every kind would be seen growing in beauty and luxuriance where now the eye of the traveller, or the sojourner, is obliged to rest upon nought but wilds and weeds ! How many fields would be ploughed and sown, and cultivated with success, which now lie waste and barren as the deserts of Arabia ! How many cattle and domestic animals of every description ; fit for the use of man, would be seen thriving and healthy, awaiting a profitable market, where now there are none, or those whose sickly and squallid appearance, bespeaks the indolence and neglect of their owners! How many subtantial rail fences would be erected, when there is now scarcely a brush bulwark against the encroachments of man and beast? —How many neat stone walls would take the place of rail fences, remaining lasting monuments of the virtue of their owners—for industry and virtue are synonimous in agricultural life! How many ditches would be seen running thro' our swamps, and yielding or restoring to wholesome vegetation, those nurseries of wild unprofitable and poisonous plants, whose dark damp shades are not only lost to agriculture, but send forth daily their pestilential vapors, spreading disease and death among the plough boys?

It is not the industrious plough boy, who will feel the application of these remarks. He will take care that his fields, and his fences, his flourishing fruit trees, his overflowing cribs and barns, and his fat cattle, plump and smooth as a turtle fed alderman, shall prove to the world that he never fails to attend the admonition of our motto.

But it is to the slothful, that this essay is addressed. Pluck up the weeds, and useful plants will take care of themselves. Reform the indolent, and the industrious will find a new spur to exertion. Ye careless and slothful plough boys, then be advised by a friend. Cast off the sin of idelness which so easily besets you, and imitate your industrious neighbours. Resolve for the future, *in the morning to sow your seed, and in the evening withhold not*

your hand, and you will soon find that the blessings of heaven await those who deserve them; and health, prosperity, and a quiet conscience are the never failing rewards of virtuous industry.

FROM THE LONDON MECHANIC'S WEEKLY JOURNAL.

WELDING THIN PLATE IRON.

Mr. Siebe, in describing the manner in which he performs this operation, directs borax to be melted in an earthern vessel, or pot, (not a metalic one, particularly if made of bass or copper)—when the borax is melted, add one tenth of its weight of sal ammoniac, which must be pounded. When the two substances are well incorporated together over the fire, the mixture is to be poured out upon an iron plate and allowed to cool—it will then resemble glass—it is now to be well pounded and mixed with an equal quantity of unslacked lime, in which state it is fit for use.

In performing the operation of welding, the iron or steel must be brought to a red heat, and then the pounded mixture scattered over the surface, which will melt and flow over it like wax.

The iron or steel is now again to be introduced into the fire, and raised to a heat considerably below the common welding heat, (which proves itself by the cast steel) when it is to be taken out and immediately beaten with a hammer until the surfaces are properly welded together. Mr. Siebe welds two pieces of cast steel together —of iron and cast steel, or two of thin sheet iron, and at a temperature very little above a red heat.

FROM THE NEW ENGLAND FARMER.

THE NATIVE POTATOE.

Com. Hull, not forgetful of the interests of science, has transmitted to the President of the Massachusetts Agricultural Society a box of the tubers of the common potatoe, found growing in a wild state in the island of San Lorenzo in Peru. It has long since been known that the common potatoe, for many years called the Virginia potatoe, under an erroneous impression that it was an indigneous plant in that state, is not a native of North America. Bonpland, the associate of Humbolt, was not able to find it in Mexico or in any other part of North America.—Within a few years its origin has been a subject of great curiosity in England, and pains have been taken to procure the native or wild roots for cultivation, not so much under the expectation of improving them by culture and introducing new and better varieties, but from a laudable and natural desire of seeing the process, by which a root naturally small and bitter, has been made so grateful and important an article of food.

It was thought that we should not be behind the Europeans in this zeal as to the natural history of an American plant, and it was particularly recommended to Commodore Hull as an object of

interest. He had previously tendered his services to the Massachusetts Agricultural Society in procuring plants or seeds, and has redeemed his pledge in a very satisfactory manner. These roots were taken up in the island of San Lorenzo on the 18th of September, 1824, were packed judiciously in dry sand, and have arrived in a perfect state, just starting and fit for cultivation. A fair experiment will be made of them at Cambridge, and in a few private gardens; and the result shall be made known. The Massachusetts Agricultural Society beg leave to return their respectful acknowledgements to Commodore Hull, and to John S. Skinner, Editor of the American Farmer, by whose care and attention they reached their destination.

It is almost incalculable how great are the benefits which our naval officers might confer on their country, by their exertions, judiciously directed, in sending home the plants of the countries which they visit. There are now nearly 30,000 plants growing in the gardens of Europe which were unknown there thirty years since—and we must, and we shall, finally, collect in our country as extensive specimens. The progress will be more slow, but it certainly will arrive at the same point of perfetion.

J. LOWELL, *President of the Mass. Ag. Soc'y.*

Boston, April 14, 1825.

NEW BEES.

The London Horticultural Society has lately received from New South Wales, through the liberality of Captian M'Arthur, son of John M'Arthur, Esq. of Camden, in that colony, a fine healthy hive of native bees. They differ materially from the bees of Europe, being infinitely smaller, and wholly without stings. The honey which they produce is said to be of excellent quality, and is distinguished by a peculiar fragrance ; it is one of the few products of that singular country which serves as food for the natives.

CAMPHIRE TREE.

The tree from which camphire is procured is a production of China, and, it is said, that some of them are found more than a hundred and fifty feet in height, and vastly large in circumference. The trunks of these trees, when old, emit sparks of fiire; but their flame is so subtile, that no danger is to be apprehended from it.

The Chinese obtain camphire by taking the branches fresh from the tree, chopping them small, and laying them to soak in spring water, for three days and nights. Then they are put into a kettle where they are boiled for a certain time, during which they continually stir them with a stick of willow. This liquor is then gently strained off into earthen vessels well varnished ; after which they purify it with a certain kind of earth reduced to a very fine powder.

FROM THE COLUMBIAN CENTINEL.

UNITED STATES' STATISTICKS.

The Washington papers have recently given the very valuable tabular statistical views of the Commerce and Navigation of the United States, in the year ending September 30, 1824. The following are the aggregates of the statement of the last year, contrasted with those of the preceding year, to show their increase and decrease:

	1823.	1824.	*Increase.*
Imports	77,579,267	80,549,007	2,969.740
Exports Dom.	47,155,408	50,649,500	3,494,092
Foreign	27,543,622	25,337,157*	
Total Exports	74,699,030	75,986,657	1,287,627
Tonnage Amer.	775,271	850,033	74,726 tons.
Foreign	119,468	102,367†	

* *Decrease of foreign exports* 2,206,465.

† *Decrease of foreign tonnage* 17,101.

The table of *imports* contains forty-six countries and places from which articles have been imported, the principle of which are the following:

From Great Britain	$28,188,317
From other British possessions	6,084,416
From France	7,191,567
From other French possessions	884,084
From Spain	568,217
From Cuba and other Spanish possessions	8,756,022
From Hayti	2,247,235
From China &c.	5,618,502
From Russia	2,209,663
From Holland and possessions	1,210,267
From Mexico, Colombia, &c.	6,786,769
From Brazil, &c.	2,074,119
From Italy and Malta	1,029,439
From Sweden &c.	2,110,666
From Denmark &c.	1,145,258
From Asia generally	5,618,502

The ballance of 80 millions and a half of *imports*, was from the Hanse Towns, African ports, the Canaries, Phillipine Islands, Honduras, Portuguese ports, the Barbary States, Cape of Good Hope, the South Seas, and North Coast of America. Of the imports, over seventy five millions were imported in American vessels.

EXPORTS.—The exports in the last year, ending September 30th, amounted to nearly seventy six millions. Of these, the *domestic* articles exceeded fifty millions and a half, the *foreign* about twenty-five millions and a half.—Over sixty-seven millions were exported

in *American* vessels, and but about eight millions and a half in *foreign* vessels.

TONNAGE.—Of this branch of navigation, the American tonnage entered exceeded 850,000 tons; the foreign 102,367 tons. That *departing*, was American, over 900,000 and only 102,552 tons foreign. Of the foreign tonnage, nearly two thirds belonged to England; and more than a tenth part to Hayti.

REMARKS.—The *National Intelligencer*, very justly observes, that the above statistical view is of great interest and affords abundant food for reflection; and from which political economists may make valuable speculations. It will be seen by it, that during the last statistical year, the imports exceeded by nearly three millions of dollars those, of the preceding year; that the excess of the domestic exports was nearly three millions and a half; while the foreign exports decreased nearly two millions and a quarter. The increase of *American*, and decrease of foreign tonnage, are also worthy of remark. The former, in the year, having increased nearly 75,000 tons, and the latter decreased over 17,000 tons.

It may be worth the remark, that the imports from, and exports to Hayti, exceeded those to the whole empire of Russia; greater part of the exports to Hayti being domestic products, exported in American vessels.

The commerce of the several states may be estimated by the following statement of the Imports and Exports, in the year ending the 30th September last.

States.	*Value of Imports.*	*Of Exports.*
New York	$36,113,723	$22,897,134
Massachusetts	15,373,758	10,434,328
Pennsylvania	11,865,531	9,364,893
Maryland	4,551,642	4,863,233
Louisiana	4,539,769	7,928,820
South Carolina	2,166,185	8,034,982
Rhode-Island	1,388,336	872,899
Virginia	639,787	3,277,564
Georgia	551,888	4,623,982
Maine	768,643	900,195
Connecticut	581,510	575,852
North-Carolina	465,836	588,733
District of Columbia	379,958	722,405
New-Hampshire	245,513	185,333
Vermont	161,854	208,258
New-Jersey	637,518	28,989

FROM THE NEW YORK ADVOCATE.

PICKLE FOR BEEF AND PORK.

The following receipt for making pickle for beef or pork, is strongly recommended to the adoption of those who pickle beef and pork for family use.———Persons in the trade, who will adopt it, will

find a ready sale for their beef and pork. It has been used by many families in this city, and always approved. I do not hesitate to assert that there is no picle in use to be compared with it. It is familiarly known by the name of the "*Knickerbocker Pickle.*" Could this receipt be generally adopted, our pickled beef and pork would have certain preference in the foreign markets.

RECEIPT.

Six gallons water, 9 lbs. salt, coarse and fine mixed, 3 lbs. brown sugar, 3 ounces salt petre, 1 ounce pearl ash, 1 gallon molasses to every 6 gallons water.

In making a larger or smaller quantity of pickle, the above proportions are to be observed. Boil and skim these ingredients well, and when cold, put it over the beef or pork.

Mammoth Hog.—Messrs. Joseph and George Levers, of Northampton county, in Pennsylvania, are preparing for the Philadelphia market a hog of the following dimensions: he is now 8 feet 9 inches long upwards of two feet in thickness, and more than 7 feet in circumference, weighs upwards of 800 weight, and is in a thriving condition. It is calculated that he will weigh, by Christmas, between 10 and 1200 weight.

The following lines from the Albany Plough Boy, rival the sweetest strains of Shenstone or of Akenside. Like those writers, all Mr. Southwick's effusions breathe the same openness of heart, the same abhorrence of duplicity and exalted love of virtue. (ROCHESTER TELEGRAPH.

TO A COUNTRY GIRL,

Who expressed a wish to lead a town life.

BY S. SOUTHWICK.

Sweet Mary, sigh not for the town,
Where vice and folly reign—
Spurn not the humble homespun gown
That suits the rural plain.

In every street the city's glare
Doth simple hearts betray,
And simple hearts who wander there
Are sure to lose their way.

The tradesman plays his wily part,
To take the stranger in—
The profligate displays his art,
The modest maid to win—

He lures her to perditions brink
By every treach'rous scheme,
Then leaves the hapless wretch to sink
In pleasure's guilty stream!

The flaunting crowd that seem so gay,
May please you for a while—
But joy with these doth rarely stay,
Or sweet contentment's smile.

The splendid dome that proudly rears
Its gilded roof on high,
Full oft conceals pale envy's tears
And disappointment's sigh.

There foul ambition loves to dwell,
False pride and lust of fame—
There malice and revenge rebel
Against the good man's name.

Ah! little do you know, sweet maid
What are the city spoils,
Where villains ply the canting trade.
And fraud is drest in smiles.

Then, Mary, sigh no more to rove,
Or change your native fields,
The rural walk, the verdant grove,
For all the city yields.

And when some swain, of soul sincere,
Shall seek your love to gain,
Trust to his faith nor never fear
That you shall trust in vain.

So shall your rustic life be spent,
With every blessing crowned—
Within your doors shall sweet content
And faithful love be found.

And when your infant offspring rise,
A mother's smile to greet,
The joy that sparkles in their eyes,
Shall your own bliss complete!

Your tide of life, thus even flowing
Will ebb at last, 'tis true—
When calm with hope your bosom glowing
You'll bid the world adieu!

Some there are who appear to walk the road of life with great circumspection, and make no step till they think themselves secure from the hazzard of a precipice; when neither pleasure nor profit can tempt them from the beaten path; who refuse to climb lest they should fall, or run lest they should stumble, and move slowly forward without any compliance with those passions by which the hardy and vehement are seduced and betrayed.